
Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)

217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: [year=2007; month=12; day=13; hr=10; min=7; sec=33; ms=709;]

Reviewer Comments:

Seq Id 1 through 12

Invalid responses for <213>, the valid responses can be either Artificial, unknown or Genus and species. The inserted responses in <213> can be valid if inserted in <223> and indicate <213> responses as Artificial or Unknown.

Validated By CRFValidator v 1.0.3

Application No: 10593659 Version No: 1.0

Input Set:

Output Set:

Started: 2007-11-21 17:38:17.978

Finished: 2007-11-21 17:38:19.425

Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 447 ms

Total Warnings: 10

Total Errors: 12

No. of SeqIDs Defined: 22

Actual SeqID Count: 22

Error code		Error Description						
E	356	Organism is not permitted in <213> in SEQ ID (1)						
Ε	356	Organism is not permitted in <213> in SEQ ID (2)						
E	356	Organism is not permitted in <213> in SEQ ID (3)						
E	356	Organism is not permitted in <213> in SEQ ID (4)						
E	356	Organism is not permitted in <213> in SEQ ID (5)						
E	356	Organism is not permitted in <213> in SEQ ID (6)						
E	356	Organism is not permitted in <213> in SEQ ID (7)						
E	356	Organism is not permitted in <213> in SEQ ID (8)						
E	356	Organism is not permitted in <213> in SEQ ID (9)						
E	356	Organism is not permitted in <213> in SEQ ID (10)						
E	356	Organism is not permitted in <213> in SEQ ID (11)						
E	356	Organism is not permitted in <213> in SEQ ID (12)						
W	402	Undefined organism found in <213> in SEQ ID (13)						
W	402	Undefined organism found in <213> in SEQ ID (14)						
W	402	Undefined organism found in <213> in SEQ ID (15)						
W	402	Undefined organism found in <213> in SEQ ID (16)						
W	402	Undefined organism found in <213> in SEQ ID (17)						
W	402	Undefined organism found in <213> in SEQ ID (18)						
W	402	Undefined organism found in <213> in SEQ ID (19)						
W	402	Undefined organism found in <213> in SEQ ID (20)						

Input Set:

Output Set:

Started: 2007-11-21 17:38:17.978

Finished: 2007-11-21 17:38:19.425

Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 447 ms

Total Warnings: 10

Total Errors: 12

No. of SeqIDs Defined: 22

Actual SeqID Count: 22

Error code Error Description

W 402 Undefined organism found in <213> in SEQ ID (21)

W 402 Undefined organism found in <213> in SEQ ID (22)

SEQUENCE LISTING

<110>	Hardwick, James;								
	Dai, Hongyue;								
	Lamb, John R.								
	Sepp-Lorenzino, Laura;								
	Severino, Michael E.;								
	Zhang, Chunsheng								
	inding, on anothering								
<120> Method and Biomarkers for Detecting									
Tumo	or Endothelial Cell Proliferation								
<130>	21412YP								
	10593659								
<141>	2007-11-21								
41.5.0 5	DCT /HG2005 /00074								
	PCT/US2005/009874								
<151>	2005-03-24								
<150×	60/556,645								
	2004-03-26								
\1J1>	2004-03-20								
<160>	22								
1200									
<170>	FastSEQ for Windows Version 4.0								
	~								
<210>	1								
<211>	21								
<212>	DNA								
<213>	Primer								
<400>	1								
gacaga	agtcc gaatgcatgc t	21							
<210>	2								
<211>	20								
<212>	DNA								
<213>	Primer								
<400>									
tgccg	gtctg gagaaatacc	20							
<210>									
<211>									
<212>									
<213>	Probe								
<100°	2								
<400>		27							
ecetgt	gatt ctaaccatgg ccttctc	27							
<210>	4								
<211>									
<212>									
_									

<213> Primer

<400> 4	
cggttcttat caggctcata ggat	24
<210> 5	
<211> 20	
<212> DNA	
<213> Primer	
VZ137 FIIMEI	
<400> 5	
	20
tgtgggaggc aacacgattt	20
<210> 6	
<211> 24	
<212> DNA	
<213> Probe	
<400> 6	
tcaggaatag gctgcctgca cccc	24
<210> 7	
<211> 22	
<212> DNA	
<213> Primer	
\ZI3> FIIMEI	
<400> 7	
	0.0
gaccgaaacg tggctgtcta tc	22
<210> 8	
<211> 20	
<212> DNA	
<213> Primer	
<400> 8	
gtgatgtgca ccgcatagct	20
<210> 9	
<211> 22	
<212> DNA	
<213> Probe	
\ZI3> Flobe	
<400> 9	
	0.0
ccgctacttc cactggcgtc gg	22
<210> 10	
<211> 18	
<212> DNA	
<213> Primer	
<400> 10	
aattgggctc ctgcacac	18
<210> 11	
<211> 19	
<212> DNA	
<213> Primer	

2366

tgatcaataa aatgtgattt tttctg

<210> 14 <211> 2360 <212> DNA <213> Homo Sapien <400> 14

acagtgegga gacegeagee ceggageeeg ggeeagggte caectgteee egeagegeeg 60 getegegece teetgeegea gecacegage egeegtetag egeecegace tegecaceat 120 gagageeetg etggegege tgettetetg egteetggte gtgagegaet eeaaaggeag 180 caatgaactt catcaagttc catcgaactg tgactgtcta aatggaggaa catgtgtgtc 240 caacaagtac ttctccaaca ttcactggtg caactgccca aagaaattcg gagggcagca 300 ctgtgaaata gataagtcaa aaacctgcta tgaggggaat ggtcactttt accgaggaaa 360 ggccagcact gacaccatgg gccggccctg cctgccctgg aactctgcca ctgtccttca 420 qcaaacqtac catqcccaca qatctqatqc tcttcaqctq qqcctqqqqa aacataatta 480 ctgcaggaac ccagacaacc ggaggcgacc ctggtgctat gtgcaggtgg gcctaaagcc 540 gcttgtccaa gagtgcatgg tgcatgactg cgcagatgga aaaaagccct cctctcctcc 600 agaagaatta aaatttcagt gtggccaaaa gactctgagg ccccgcttta agattattgg 660 gggagaatte accaccateg agaaccagee etggtttgeg gecatetaea ggaggeaeeg 720 ggggggetet gteacetaeg tgtgtggagg cageeteate ageeettget gggtgateag 780 cgccacacac tgcttcattg attacccaaa gaaggaggac tacatcgtct acctgggtcg 840 ctcaaggctt aactccaaca cgcaagggga gatgaagttt gaggtggaaa acctcatcct 900 acacaaggac tacagcgctg acacgcttgc tcaccacaac gacattgcct tgctgaagat 960 ccgttccaag gagggcaggt gtgcgcagcc atcccggact atacagacca tctgcctgcc 1020 ctcgatgtat aacgatcccc agtttggcac aagctgtgag atcactggct ttggaaaaga 1080 gaattctacc gactatctct atccggagca gctgaaaatg actgttgtga agctgatttc 1140 ccaccgggag tgtcagcagc cccactacta cggctctgaa gtcaccacca aaatgctgtg 1200 tgctgctgac ccacagtgga aaacagattc ctgccaggga gactcagggg gacccctcgt 1260 ctgttccctc caaggccgca tgactttgac tggaattgtg agctggggcc gtggatgtgc 1320 cctgaaggac aagccaggcg tctacacgag agtctcacac ttcttaccct ggatccgcag 1380 tcacaccaaq qaaqaaatq qcctqqccct ctqaqqqtcc ccaqqqaqqa aacqqqcacc 1440 accegettic tigetggtig teatititige agtagagica tetecateag etgtaagaag 1500 agactgggaa gataggctct gcacagatgg atttgcctgt gccacccacc agggcgaacg 1560 acaatagett tacceteagg cataggeetg ggtgetgget geecagaeee etetggeeag 1620 gatggagggg tggtcctgac tcaacatgtt actgaccagc aacttgtctt tttctggact 1680 gaagcctgca ggagttaaaa agggcagggc atctcctgtg catgggtgaa gggagagcca 1740 gctcccccga cggtgggcat ttgtgaggcc catggttgag aaatgaataa tttcccaatt 1800 aggaagtgta acagctgagg tctcttgagg gagcttagcc aatgtgggag cagcggtttg 1860 gggagcagag acactaacga cttcagggca gggctctgat attccatgaa tgtatcagga 1920 aatatatatg tgtgtgtatg tttgcacact tgtgtgtggg ctgtgagtgt aagtgtgagt 1980 aagagctggt gtctgattgt taagtctaaa tatttcctta aactgtgtgg actgtgatgc 2040 cacacagagt ggtctttctg gagaggttat aggtcactcc tggggcctct tgggtccccc 2100 acgtgacagt gcctgggaat gtattattct gcagcatgac ctgtgaccag cactgtctca 2160 gtttcacttt cacatagatg tccctttctt ggccagttat cccttccttt tagcctagtt 2220 catccaatcc tcactgggtg gggtgaggac cactcctgta cactgaatat ttatatttca 2280 ctatttttat ttatattttt qtaattttaa ataaaaqtqa tcaataaaat qtqatttttc 2340 2360 tgatgaaaaa aaaaaaaaa

<210> 15

<211> 1857

<212> DNA

<213> Rattus

<400> 15

ctcaagctca cactggctgg acttcctcgc catgacagtc tgtacctcta actgatccca 60 gggatgatac cacctacatt tggggtggtt cttctcgcct cagttaaacc tctctgggag 120 caccatcaca gacacccaca gaagtttgtt ccctagatga ttctaggtcc tgtggagttg 180

acaagattga	ccatcacgct	ctcagcaatc	gggtgaagta	aacaccaccg	ttgtctccat	240
ggaaatgctt	aactacggct	tgctagtaag	gactccagac	tccaaagagg	ccacaccatg	300
aagattctcc	tgctgtgtgt	ggcactgctg	ctgacctggg	acaatggcat	ggtcctggga	360
gagcaggagt	tctctgacaa	tgagctccaa	gaactgtcca	ctcaaggaag	taggtatgtt	420
aataaggaga	ttcagaacgc	cgtccagggg	gtgaagcaca	taaagaccct	catagaaaaa	480
accaacgcag	agcgcaagtc	cctgctcaac	agtttagagg	aagccaaaaa	gaagaaagag	540
ggtgctctag	atgacaccag	ggattctgaa	atgaagctga	aggctttccc	ggaagtgtgt	600
aacgagacca	tgatggccct	ctgggaagag	tgtaagccct	gcctgaagca	cacctgcatg	660
aagttctacg	cacgcgtctg	caggagcggc	tcggggctgg	ttggtcgcca	gctagaggag	720
tttctgaacc	agagctcacc	cttctacttc	tggatgaacg	gggaccgcat	cgactccctg	780
ctggagagtg	accggcagca	gagccaagtc	ctagatgcta	tgcaggacag	cttcactcgg	840
gcgtctggca	tcatacatac	gcttttccag	gaccggttct	tcacccatga	gccccaggac	900
atccaccatt	tctcccccat	gggcttccca	cacaagcggc	ctcatttctt	gtaccccaag	960
tcccgcttgg	tccgcagcct	catgcctctc	tcccactacg	ggcctctgag	cttccacaac	1020
atgttccagc	ctttctttga	tatgatacac	caggctcaac	aggccatgga	cgtccagctc	1080
catagcccag	ctttacagtt	cccggatgtg	gatttcttaa	aagaaggtga	agatgacccg	1140
acagtgtgca	aggagatccg	ccataactcc	acaggatgcc	tgaagatgaa	gggccagtgt	1200
gagaagtgcc	aagagatctt	gtctgtggac	tgttcgacca	acaatcctgc	ccaggctaac	1260
ctgcgccagg	agctaaacga	ctcgctccag	gtggctgaga	ggctgaccca	gcagtacaac	1320
gagctgcttc	attccctcca	gtccaagatg	ctcaacacct	catccctgct	ggaacagctg	1380
aacgaccagt	tcacgtgggt	gtcccagctg	gctaacctca	cacagggcga	tgaccagtac	1440
cttcgggtct	ccacagtgac	aacccattct	tctgactcag	aagtcccctc	tcgtgtcact	1500
gaggtggtgg	tgaagctgtt	tgactctgac	cccatcacag	tggtgttacc	agaagaagtc	1560
tccaaggata	accctaagtt	tatggacaca	gtggcagaga	aagcgctaca	ggaataccgc	1620
aggaaaagcc	gcatggaatg	agacagaagc	atcagttttc	tatatgtagg	agtctcaagg	1680
agggaatctc	ccagctttcc	gaggttgctg	cagaccccta	gagaactcac	atgtctccag	1740
cgcctaggcc	tccaccccag	cagcctctcc	ttcctctggg	ttctgtactc	taatgcctgc	1800
acttgatgct	ctgggaagaa	ctgcttcccc	cacgcaacta	atccaataaa	gcacctt	1857

<210> 16 <211> 2859 <212> DNA

<213> Homo Sapien

<400> 16

 $\verb|ctttcogcgg|| cattetttgg|| gegtgagtca|| tgcaggtttg|| cagecagece|| caaagggggt|| 60$ gtgtgcgcga gcagagcgct ataaatacgg cgcctcccag tgcccacaac gcggcgtcgc 120 caggaggagc gcgcgggcac agggtgccgc tgaccgaggc gtgcaaagac tccagaattg 180 gaggcatgat gaagactctg ctgctgtttg tggggctgct gctgacctgg gagagtgggc 240 aggtcctggg ggaccagacg gtctcagaca atgagctcca ggaaatgtcc aatcagggaa 300 gtaagtacgt caataaggaa attcaaaatg ctgtcaacgg ggtgaaacag ataaagactc 360 tcatagaaaa aacaaacgaa gagcgcaaga cactgctcag caacctagaa gaagccaaga 420 agaagaaaga ggatgcccta aatgagacca gggaatcaga gacaaagctg aaggagctcc 480 caggagtgtg caatgagacc atgatggccc tctgggaaga gtgtaagccc tgcctgaaac 540 agacctgcat gaagttctac gcacgcgtct gcagaagtgg ctcaggcctg gttggccgcc 600 agettgagga gtteetgaae eagagetege eettetaett etggatgaat ggtgaeegea 660 tegacteect getggagaac gaceggeage agaegeacat getggatgte atgeaggace 720 acttcagccg cgcgtccagc atcatagacg agctcttcca ggacaggttc ttcacccggg 780 agccccagga tacctaccac tacctgccct tcagcctgcc ccaccggagg cctcacttct 840 tettteecaa gteeegeate gteegeaget tgatgeeett eteteegtae gageeeetga 900 acttccacgc catgttccag cccttccttg agatgataca cgaggctcag caggccatgg 960 acatccactt ccatagcccg gccttccagc acccgccaac agaattcata cgagaaggcg 1020 acgatgaccg gactgtgtgc cgggagatcc gccacaactc cacgggctgc ctgcggatga 1080 aggaccagtg tgacaagtgc cgggagatct tgtctgtgga ctgttccacc aacaacccct 1140 cccaggctaa getgeggegg gagetegaeg aateceteea ggtegetgag aggttgaeca 1200 ggaaatacaa cgagctgcta aagtcctacc agtggaagat gctcaacacc tcctccttgc 1260 tggagcagct gaacgagcag tttaactggg tgtcccggct ggcaaacctc acgcaaggcg 1320 aagaccagta ctatctgegg gtcaccaegg tggetteeca caettetgae teggaegtte 1380 cttccggtgt cactgaggtg gtcgtgaagc tctttgactc tgatcccatc actgtgacgg 1440 teeetgtaga agteteeagg aagaaceeta aatttatgga gaeegtggeg gagaaagege 1500 tgcaggaata ccgcaaaaag caccgggagg agtgagatgt ggatgttgct tttgcaccta 1560 cgggggcatc tgagtccagc tcccccaag atgagctgca gcccccaga gagagctctg 1620 cacgtcacca agtaaccagg ccccagcctc caggccccca actccgccca gcctctcccc 1680 getetggate etgeacteta acaetegaet etgetgetea tgggaagaae agaattgete 1740 ctgcatgcaa ctaattcaat aaaactgtct tgtgagctga tcgcttggag ggtcctcttt 1800 ttatgttgag ttgctgcttc ccggcatgcc ttcattttgc tatggggggc aggcaggggg 1860 gatggaaaat aagtagaaac aaaaaagcag tggctaagat ggtataggga ctgtcatacc 1920 agtgaagaat aaaagggtga agaataaaag ggatatgatg acaaggttga tccacttcaa 1980 gaattgcttg ctttcaggaa gagagatgtg tttcaacaag ccaactaaaa tatattgctg 2040 caaatggaag cttttctgtt ctattataaa actgtcgatg tattctgacc aaggtgcgac 2100 aatctcctaa aggaatacac tgaaagttaa ggagaagaat cagtaagtgt aaggtgtact 2160 tggtattata atgcataatt gatgttttcg ttatgaaaac atttggtgcc cagaagtcca 2220 aattatcagt tttatttgta agagctattg cttttgcagc ggttttattt gtaaaagctg 2280 ttgatttcga gttgtaagag ctcagcatcc caggggcatc ttcttgactg tggcatttcc 2340 tgtccaccgc cggtttatat gatcttcata cctttccctg gaccacaggc gtttctcggc 2400 ttttagtetg aaccataget gggetgeagt accetaeget geeageaggt ggeeatgaet 2460 accegtggta ccaateteag tettaaaget eaggetttte gtteattaae attetetgat 2520 agaattetgg teateagatg tactgeaatg gaacaaaaet catetggetg cateceaggt 2580 gtgtagcaaa gtccacatgt aaatttatag cttagaatat tcttaagtca ctgtcccttg 2640 tetetetttg aagttataaa eaacaaaett aaagettage ttatgteeaa ggtaagtatt 2700 ttagcatggc tgtcaaggaa attcagagta aagtcagtgt gattcactta atgatataca 2760 ttaattagaa ttatggggtc agaggtattt gcttaagtga tcataattgt aaagtatatg 2820 2859 tcacattgtc acattaatgt caaaaaaaaa aaaaaaaaa

<210> 17 <211> 2018 <212> DNA <213> Rattus

<400> 17

ccccgagcga actgctgagg atccgctgtc tggcattctc tcagcctttt gtccgagcca 60 gagetgeatt cagaggagag aggeeegeta aggageaget ggaeteetge tgegageega 120 aagcccccta aggcagttga ggacctggga aggaggctcc ctgctggtgg cgcttctcct 180 ggtgcttcca atccgtgcga gactgaaaac ggcggagcgg ctacgggact ctcacaggag 240 caagetgeaa catgeaateg teegeaagee ggtgeggaeg egeettggtg gegetgetge 300 tggcctgtgg cttgttgggg gtatggggag agaaaagagg attcccacct gcccaggcca 360 caccatetet tetegggaet aaagaagtta tgaegeeace caetaagaee teetggaeta 420 gaggttccaa ctccagtctg atgcgttcct ccgcacctgc ggaggtgacc aaaggaggga 480 gggtggctgg agtcccgcca agatccttcc ctcctccgtg ccaacgaaaa attgagatca 540 acaagacttt taaatacatc aacacgattg tatcatgcct cgtgttcgtg ctaggcatca 600 tegggaaete cacaetgeta agaateatet acaagaaeaa gtgeatgaga aatggteeca 660 atatettgat egecageetg getetgggag atetgetaca cateateate gacatteeca 720 ttaatgccta caagctgctg gcaggggact ggccatttgg agctgagatg tgcaagctgg 780 tgcccttcat acagaaggct tctgtgggga tcacagtgtt gagtctatgt gctctaagta 840 ttgacagata tcgagctgtt gcttcttgga gtcgaattaa aggaattggg gttccaaaat 900 ggacagcagt agaaattgtt ttaatttggg tggtctctgt ggttctggct gtccctgaag 960 ccataggttt tgatgtgatt acgtcggact acaaaggaaa gcccctaagg gtctgcatgc 1020 ttaatccctt tcagaaaaca gccttcatgc agttttacaa gacagccaaa gactggtggc 1080 tgttcagttt ctacttctgc ttgccgctag ccatcactgc gatcttttac accctaatga 1140 cctgtgagat gctcagaaag aaaagtggta tgcagattgc cttgaatgac cacttaaagc 1200 agagacgaga agtggccaag acagtattet geetggteet egtgtttgee etetgttgge 1260 ttccccttca cctcagcagg attctgaagc tcacccttta tgaccagagc aatcctcaga 1320 ggtgtgaact tetgagtttt ttgetggttt tggaetaeat tggtateaac atggettett 1380 tgaattcctg cattaatcca atcgctctgt atttggtgag caagagattc aaaaactgct 1440

```
ttaagtcgtg tttgtgctgc tggtgccaaa cgtttgagga aaaacagtcc ttagaggaa 1500 agcaatcctg cttgaagttc aaagctaacg atcacggata cgacaacttc cgctccagca 1560 ataaatacag ctcatcttga aggaaggaac actcactgaa tctcattgtc ctcatcgtgg 1620 acagatagca ttaaaacaaa atgaaacctt tgccaaaccc aaacggaaaa ccgtgcttgc 1680 ggaaaggtgt gcacgcatgg gagagggatt gttttttaac cgttctaact ttccacacct 1740 gatatttcac gggctgttta caacctaaga aagccatggg aatgaatgaa gcctcgggaa 1800 agcacttaga ttcttagtca gcacttcagc acggctctta aaagccctca ctgcactcac 1860 agcccactta catttaaaaa caagaactca aactctattc aggggtttat tatccagtcc 1920 tatgaatctg gatacaggaa tgcatgacat tgcaaaacaa ttcttaaagc aaagttcaa 2018
```

<210> 18 <211> 4286 <212> DNA

<213> Homo Sapien

<400> 18

gagacattcc ggtgggggac tctggccagc ccgagcaacg tggatcctga gagcactccc 60 aggtaggcat ttgccccggt gggacgcctt gccagagcag tgtgtggcag gcccccgtgg 120 aggatcaaca cagtggctga acactgggaa ggaactggta cttggagtct ggacatctga 180 aacttggctc tgaaactgcg cagcggccac cggacgcctt ctggagcagg tagcagcatg 240 cagecgeete caagtetgtg eggacgegee etggttgege tggttettge etgeggeetg 300 tegeggatet ggggagagga gagaggette eegeetgaca gggeeactee gettttgeaa 360 accgcagaga taatgacgcc acccactaag accttatggc ccaagggttc caacgccagt 420 ctggcgcggt cgttggcacc tgcggaggtg cctaaaggag acaggacggc aggatctccg 480 ccacgcacca tctcccctcc cccgtgccaa ggacccatcg agatcaagga gactttcaaa 540 tacatcaaca cggttgtgtc ctgccttgtg ttcgtgctgg ggatcatcgg gaactccaca 600 cttctgagaa ttatctacaa gaacaagtgc atgcgaaacg gtcccaatat cttgatcgcc 660 agettggete tgggagaeet getgeacate gteattgaea tecetateaa tgtetaeaag 720 ctgctggcag aggactggcc atttggagct gagatgtgta agctggtgcc tttcatacag 780 aaagcctccg tgggaatcac tgtgctgagt ctatgtgctc tgagtattga cagatatcga 840 gctgttgctt cttggagtag aattaaagga attggggttc caaaatggac agcagtagaa 900 attgttttga tttgggtggt ctctgtggtt ctggctgtcc ctgaagccat aggttttgat 960 ataattacga tggactacaa aggaagttat ctgcgaatct gcttgcttca tcccgttcag 1020 aagacagctt tcatgcagtt ttacaagaca gcaaaagatt ggtggctgtt cagtttctat 1080 ttctqcttqc cattqqccat cactqcattt ttttatacac taatqacctq tqaaatqttq 1140 agaaagaaaa gtggcatgca gattgcttta aatgatcacc taaagcagag acgggaagtg 1200 gccaaaaccg tettttgeet ggteettgte tttgeeetet getggettee cetteacete 1260 agcaggattc tgaagctcac tctttataat cagaatgatc ccaatagatg tgaacttttg 1320 agetttetgt tggtattgga etatattggt atcaacatgg etteactgaa tteetgeatt 1380 aacccaattq ctctqtattt qqtqaqcaaa aqattcaaaa actqcttta